

GPFC160 Commercial

160 Watt Global Performance Switchers



FEATURES:

- 3.0 watts/cu.in. power density
- Compact size (4.5" x 7.0" x 1.7"; meets 1U height)
- Power factor corrected to IEC 1000-3-2; Class A
- Less than 300 μ A leakage
- EMI compliance to CISPR22, FCC Class B
- Commercial Approved to UL1950, IEC950, EN60950 and CSA 22.2 No. 950
- 2-year warranty
- **CE** marked to LVD

SPECIFICATIONS:

Ac Input

85-264 Vac, 47-63 Hz single phase.

Input Current

Maximum input current 2.3 A at 90 Vac, 60 Hz with full rated load. Input current harmonic content meets the requirements of IEC1000-3-2.

Hold-upTime

25 ms minimum from loss of ac input at full load, nominal line (115 Vac).

Output Power

Total regulation is the maximum deviation from the nominal voltage for all steady-state loading conditions. Each individual output is to be used within its specified limits of that output. Peak ratings are for 60 s maximum duration, 10% duty cycle.

Overload Protection

Fully protected against short circuit and output overload. Short circuit protection is cycling type power limit. Recovery after fault is automatic.

Output Noise

0.5% rms, 1% pk-pk, 20 MHz Bandwidth, differential mode. Measured with noise probe directly across output terminals of the power supply.

Transient Response

500 ms typical response time for return to within 0.5% of final value for a 50% load step change, $\Delta i/\Delta t < 0.2$ A/ms. Maximum voltage deviation is 3.5%.

Remote Sense

Provided as a standard feature. Capable of compensating for 0.25 V total of cabling losses.

Overvoltage Protection

Built in on all models. OVP crowbar reduces output voltage below nominal rating in less than 50 ms.

Voltage Adjustment

Main output $\pm 5\%$.

Input Protection

Internal ac fuse provided on all models. Fuse does not blow on overload or short circuit—fuse blows only if catastrophic failure occurs in the unit.

Inrush Current

Inrush 240 Vac is less than 37 A, averaged over the first ac half-cycle under cold start conditions. Limiting provided by internal thermistors.

Fan Output

An additional 12 Vdc, 250 mA output suitable for powering a dc fan is included in all models. The output is protected by an internal PTC in the event of an overload.

Thermal Shutdown

Provided as a standard feature. Designed to protect the unit from prolonged over temperature.

Power Fail

TTL or CMOS compatible output goes low (< 0.5 V) 8 ms before output voltage drops more than 4% below nominal voltage upon loss of ac power. The signal is factory set to trip when input power can no longer sustain the output.

Temperature Coefficient

0.03%/°C typical on all outputs.

EMI/EMC Compliance

All models include built-in EMI filtering to meet the following emissions requirements:

EMI SPECIFICATIONS	COMPLIANCE LEVEL
Conducted Emissions	EN55022 Class B; FCC Class B
Static Discharge	EN61000-4-2, 6 kV contact, 8 kV air
RF Field Susceptibility	EN61000-4-3, 3 V/meter
Fast Transients/Bursts	EN61000-4-4, 2 kV, 5 kHz
Surge Susceptibility	EN61000-4-5, 1 kV diff., 2 kV com.

Commercial Safety

Approved to UL1950, CSA22.2 950, IEC950, and EN60950. UL file #E135803 commercial; CSA #LR46516. The output(s) are intended for safety earthed Signal Output and Intermediate Circuits only. All dc outputs are SELV under normal and single fault conditions.

GPFC160 Commercial 160 Watt Single Output

Model	Output No.	Output	Output Maximum (A)	Output Peak (B)	OVP Setpoint	Ripple & Noise
GPFC160-5	1	5.1 V	25 A	31.3 A	6.2 ± 0.6 V	1%
GPFC160-12	1	12 V	11.7 A	13.3 A	14 ± 1.1 V	1%
GPFC160-15	1	15 V	9.3 A	10.7 A	18.5 ± 1.5 V	1%
GPFC160-24	1	24 V	5.8 A	6.7 A	28 ± 2.5 V	1%
GPFC160-28	1	28 V	5 A	5.7 A	34 ± 2.8 V	1%
GPFC160-48	1	48 V	2.9 A	3.4 A	55 ± 4.0 V	1%

A. Output rating with unrestricted convection cooling.
 B. Output rating with 26 cfm airflow.

GPFC160 MECHANICAL SPECIFICATIONS

INPUT:

J1
 AMP P.C.B. HEADER P/N 640445-5
 PIN 1) AC LINE MATING CONNECTOR AMP P/N
 PIN 2) N/C HOUSING 640250-5
 PIN 3) AC NEUTRAL CONTACT 770476-1
 PIN 4) N/C
 PIN 5) AC GROUND

SIGNALS: J2
 AMP P.C.B. HEADER P/N 640456-4
 MATING CONNECTOR P/N 640440-4
 PIN 1) POWER FAIL
 PIN 2) -SENSE
 PIN 3) +SENSE
 PIN 4) COMMON

FAN
 AMP P.C.B. HEADER P/N 640456-2
 MATING CONNECTOR P/N 640440-2
 PIN 1) -
 PIN 2) +

OUTPUT

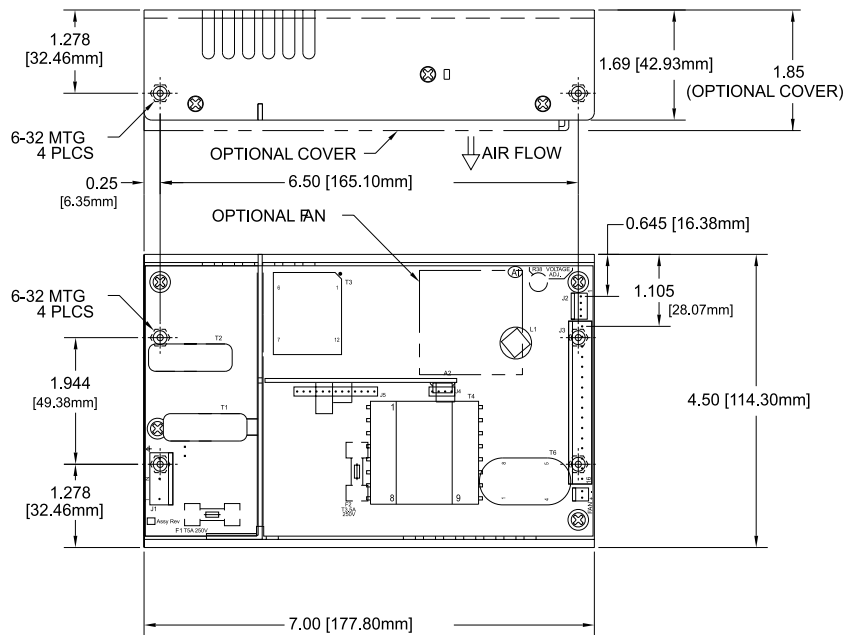
J3
 AMP P.C.B. HEADER P/N 1-640445-6
 PINS 1-4) +Vout MATING CONNECTOR AMP P/N
 PINS 5-12) COMMON HOUSING 1-640250-6
 PINS 13-16) +Vout CONTACT 770476-1

5A MAXIMUM RECOMMENDED CURRENT PER CONNECTOR PIN
 MAX. SCREW PROTRUSION THROUGH CHASSIS = 0.120" [3.05mm]
 CHASSIS THICKNESS = 0.125"

OPTIONAL COVER/FAN ASSEMBLY
 AVAILABLE, ORDER P/N 09-160CF

WEIGHT: 1.9 LBS [.86 kg] MAX.

TOLERANCES:
 X.XX ± 0.030 (0.76MM)
 X.XXX ± 0.010 (0.25MM)



Environmental Specification	Operating	Non-operating
Temperature (A)	0 to 50°C	-40 to +85°C
Humidity (A)	0 to 95% RH	0 to 95% RH
Shock (B)	20 g _{pk}	40 g _{pk}
Altitude	-500 to 10,000 ft	-500 to 40,000 ft
Vibration (C)	1.5 g _{rms} , 0.003 g ² /Hz	5 g _{rms} , 0.026 g ² /Hz

- A. Units should be allowed to warm up/operate under non-condensing conditions before application of power. Derated output current and total output power by 2.5% per 50°C.
- B. Random vibration—10 to 2000Hz, 6dB/octave roll-off from 350 to 2000Hz, 3 orthogonal axes. Tested for 10 min./axis operating and 1 hr./axis non-operating.
- C. Shock testing—half-sinusoidal, 10 ± 3 ms duration, ± direction, 3 orthogonal axes, total 6 shocks.

